What is claimed is:

1. A medical device comprising:

a device body extending from a proximal end to a distal end;

at least one electrode coupled with the device body, where the at least one electrode is configured to transmit and receive electrical signals to and from tissue; and

a rheometric material electrically coupled with the at least one electrode.

2. The medical device as recited in claim 1, wherein the rheometric material comprises a coating of electroactive polymer having a thickness of about 180 micron.

3. The medical device as recited in claim 1, wherein the rheometric material comprises a strip of material wound around a longitudinal axis of the device body.

4. The medical device as recited in claim 1, wherein the rheometric material comprises a layer of material on an outer surface of the at least one electrode.

5. The medical device as recited in claim 1, wherein the device body is defined by a first surface and a second surface, and the at least one electrode is disposed on the first surface of the device body.

6. The medical device as recited in claim 5, wherein the first surface is opposite the second surface, and at least one electrode is disposed on the second surface of the device body.

7. The medical device as recited in claim 1, wherein the device body comprises an elongate lead body configured to be coupled with a pulse generator.

8. The medical device as recited in claim 1, wherein the rheometric material comprises an electroactive polymer.

9. A medical device comprising:

an elongate device body extending from a proximal end to a distal end;

at least one assembly coupled with the device body, where the at least one assembly is configured to stiffen the device body; and

the at least one assembly including a rheometric material, the rheometric material contracts and/or stiffens when electrical current is applied thereto.

10. The medical device as recited in claim 9, further comprising a control system which selectively applies current to the rheometric material, and a means for providing feedback to the control system.

11. The medical device as recited in claim 9, further comprising a means for transferring fluid along the elongate device body.

12. The medical device as recited in claim 9, wherein the device body is defined by a first outer surface and a second outer surface, and the at least one assembly is disposed on the first outer surface of the device body.

13. The medical device as recited in claim 12, wherein the first outer surface is opposite the second outer surface.

14. The medical device as recited in claim 9, wherein a plurality of assemblies are disposed on a first outer surface of the device body.

15. The medical device as recited in claim 9, wherein the device body includes a first outer surface and a second outer surface, and a plurality of assemblies are disposed on the first outer surface, and a plurality of assemblies are disposed on the second outer surface.

16. The medical device as recited in claim 9, wherein the at least one assembly is disposed adjacent to the distal end of the device body.

17. The medical device as recited in claim 9, wherein the assembly is disposed within at least one lumen of the device body along at least a portion of a length of the device body.

18. The medical device as recited in claim 17, wherein at least one assembly is disposed along the entire length of the device body.

19. The medical device as recited in claim 17, wherein the device body includes two or more lumens therein, and at least one lumen has a different cross-section than another lumen, and rheometric material is disposed within the two or more lumens.

20. The medical device as recited in claim 9, wherein the rheometric material comprises magnoactive material.

21. The medical device as recited in claim 9, wherein the rheometric material comprises electroactive material.

22. The medical device as recited in claim 9, wherein the device body has a preformed curved portion.

23. A medical device comprising:

a device body extending from a proximal end to a distal end;

at least one assembly coupled with the device body, the at least one assembly includes at least one winding of material wound around a longitudinal axis of the device body, where the at least one assembly is configured to stiffen the device body; and

the at least one assembly including a rheometric material, the rheometric material contracts and/or stiffens when current is applied thereto.

24. The medical device as recited in claim 23, wherein the rheometric material is an electroactive polymer coating of about 180 micron in thickness.

25. The medical device as recited in claim 23, wherein the winding of material extends from the proximal end to the distal end of the device body.

26. The medical device as recited in claim 23, further comprising a control system which selectively applies current to the electroactive material, and a means for providing feedback to the control system.

27. The medical device as recited in claim 23, wherein the winding of material is disposed within one or more lumens of the device body.

28. A medical device comprising:

an elongate device body extending from a proximal end to a distal end;

at least one assembly coupled with the device body; and

means for electrically stiffening the at least one assembly and the device body.

29. The medical device as recited in claim 28, wherein the at least one assembly includes an electroactive polymer associated therewith.

30. The medical device as recited in claim 28, wherein the at least one assembly includes magnoactive material associated therewith.

31. The medical device as recited in claim 28, wherein the device body includes at least one lumen therein, and rheometric material is disposed within one or more lumens.

32. The medical device as recited in claim 31, wherein the device body further includes at least one lumen configured to receive a medical instrument or fluid therethrough.

33. The medical device as recited in claim 28, wherein the device body has a preformed curve.

34. A medical device comprising:

an elongate device body extending from a proximal end to a distal end;

the device body including at least one lumen therein, and rheometric material is disposed within one or more lumens, the rheometric material configured to stiffen the elongate device body upon application of electrical energy to the rheometric material.

35. The medical device as recited in claim 34, wherein the rheometric material includes an electroactive polymer.

36. The medical device as recited in claim 34, wherein the rheometric material includes magnoactive material.

37. The medical device as recited in claim 34, wherein the device body includes a passage extending from the proximal end to the distal end, the passage sized to receive at least one instrument therein, and a plurality of lumens are disposed about the passage.

38. A method comprising:

associating at least one assembly with a device body, the at least one assembly including at least one electrode;

electrically coupling a rheometric material with the at least one electrode;

applying energy to at least one assembly; and

the rheometric material stiffening at least a portion of the device body.

39. The method as recited in claim 38, wherein applying energy comprises applying voltage to multiple assemblies each including at least one electrode electrically coupled with a layer of electroactive polymer.

40. The method as recited in claim 38, wherein applying energy includes applying energy to each assembly simultaneously.

41. The method as recited in claim 38, wherein applying energy includes selectively applying energy to each assembly at different times.

42. The method as recited in claim 38, wherein applying energy includes applying voltage to an assembly which is wound around an axis of the device body.

43. The method as recited in claim 38, wherein applying energy includes applying energy to an assembly disposed at a distal end of the device body.

44. The method as recited in claim 38, wherein applying energy includes applying voltage to a plurality of assemblies disposed on a single side of the device body.

45. The method as recited in claim 38, wherein applying energy includes applying voltage to a plurality of assemblies disposed on at least two sides of the device body.

46. The method as recited in claim 38, further comprising selectively varying stiffness of the device body.

47. The method as recited in claim 46, wherein selectively varying the stiffness of the device body includes moving the device body within a passage.

48. The method as recited in claim 46, wherein selectively varying the stiffness of the device body includes bracing the device body against movement.

49. The method as recited in claim 46, wherein selectively varying the stiffness of the device body includes moving fluid through the device body.

50. A method comprising:
providing an elongate device body having a length;
associating rheometric material along at least a portion of the length;
applying an electric current to the rheometric material; and
stiffening at least a first portion of the device body.

51. The method as recited in claim 50, wherein applying electric current includes pulsing the electric current and alternately stiffening and relaxing the first portion of the device body.

52. The method as recited in claim 50, wherein stiffening includes stiffening the entire length of the device body.

53. The method as recited in claim 50, wherein the device body includes one or more lumens therein, associating includes disposing rheometric material in at least one lumen of the device body.

54. The method as recited in claim 50, wherein the device body includes one or more lumens disposed along at least a portion of longitudinal axis of the device body, and wherein associating material includes disposing rheometric material in two or more of the lumens.

55. The method as recited in claim 50, further comprising stiffening multiple portions of the device body.

56. The method as recited in claim 50, wherein applying electric current includes pulsing the electric current and alternately stiffening and relaxing the multiple portions of the device body.

57. The method as recited in claim 50, further comprising preforming the elongate device body with a curve.